Serial No.: Filed: 10/09/2001 Examiner: Group Art Unit: Applicant Kenneth J Rothschild

Applicant Kenneth J Rothschild
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins
Atty. Docket No.: AMBER-06819 Sheet 1 of 36

1G. 1A R= —CH<sub>3</sub>

ALANINE

VALINE

HO CH<sub>3</sub> O CH<sub>3</sub> C

OOC-ALANINE-VALINE-TYROSINE-LYSINE-TRYPTOPHAN NH3+

Serial No.: Filed: 10/09/2001 Examiner: Group Art Unit:

Applicant: Kenneth J. Rothschild
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins
Atty. Docket No.: AMBER-06819 Sheet 2 of 36

5' AUG UAC ACU AAA CAU GAU GAU AUC CGA AAA UGA **MRNA TRANSLATION PROTEIN** 60 S **RIBOSOME** -3' MRNA **MRNA** (INITIATION COMPLEX) (fMet) **PEPTIDYL** TRANS-TRANS-Tyr LOCATION **FERASE MRNA MRNA MRNA** Ile (fMet 3' NRNA His **MRNA** (fMet His **NASCENT PROTEIN** 

FIG. 2

Serial No.. Filed. 10/09/2001 Examiner: Group Art Unit;

Applicant Kenneth J. Rothschild

Title: N-Terminal and C-Terminal

Markers In Nascent Proteins

Atty. Docket No · AMBER-06819 Sheet 3 of 36

A-3'-OH

ACCEPTOR

STEM

STEM

STEM

STEM

STEM

SYNTHETASE

CHEMICAL

AMINOACYL-TRNA

AMINOACYL-TRNA

FIG. 3A

Seria No. Filec. 10/09/2001 Examiner: Group Art Unit:

Applicant: Kenneth J. Rothschild
Title: N-Terminal and C-Terminal

Markers In Nascent Proteins
Atty. Docket No.: AMBER-06819 Sheet 4 of 36

Atty. Docket No.: AMBER-06819 Sheet 4 of 3

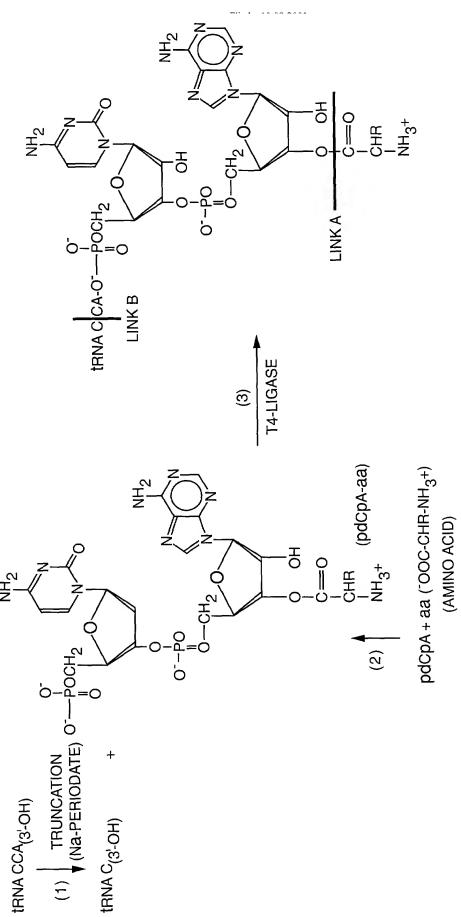
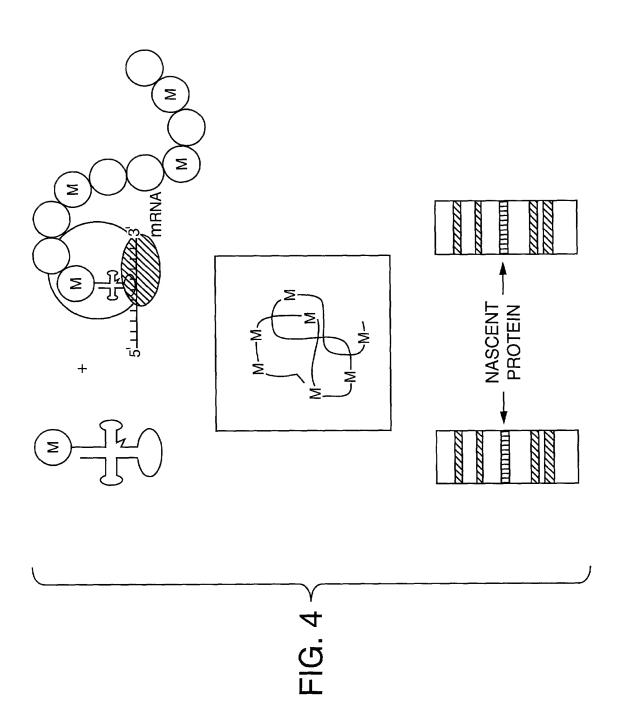


FIG. 3B

Serial No.. Filed. 10/09/2001 Examiner: Group Art Unit

Applicant: Kenneth J. Rothschild
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins

Atty. Docket No.: AMBER-06819 Sheet 5 of 36

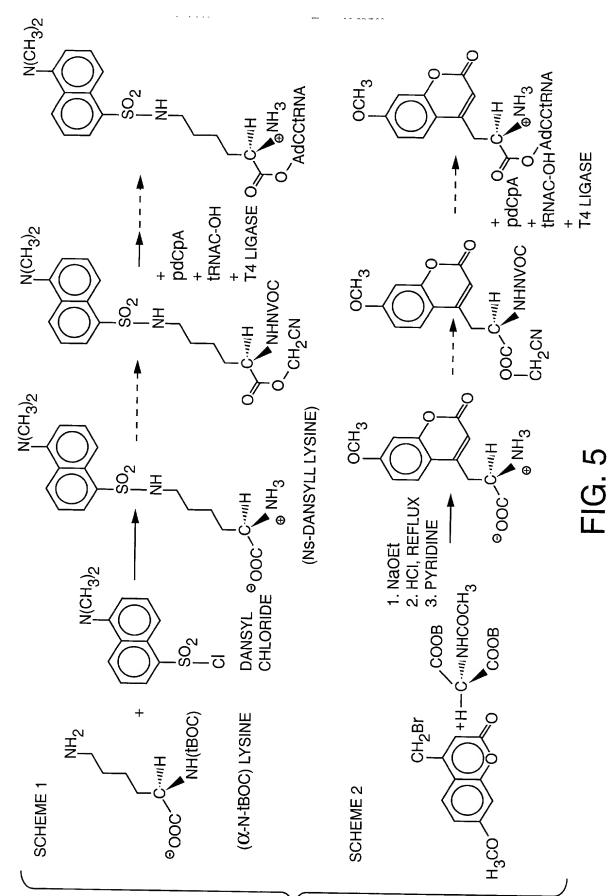


Serial No.. Examiner: Filed. 10/09/2001 Group Art Unit:

Applicant. Kenneth J. Rothschild Title: N-Terminal and C-Tel

N-Terminal and C-Terminal Markers In Nascent Proteins

Markers In Nascent Proteins
Atty. Docket No.: AMBER-06819 Sheet 6 of 36



## FIG. 6A

Serial No..

Examiner:

Title.

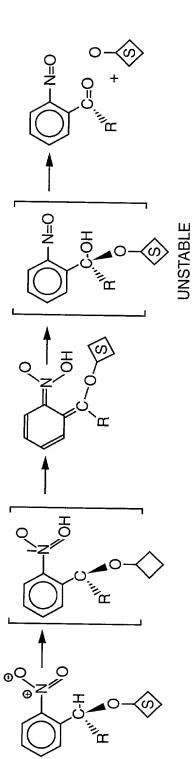
Applicant. Kenneth J Rothschild

N-Terminal and C-Terminal Markers In Nascent Proteins

Filed. 10/09/2001

Group Art Unit:

FIG. 6B



Serial No.. I Examiner.

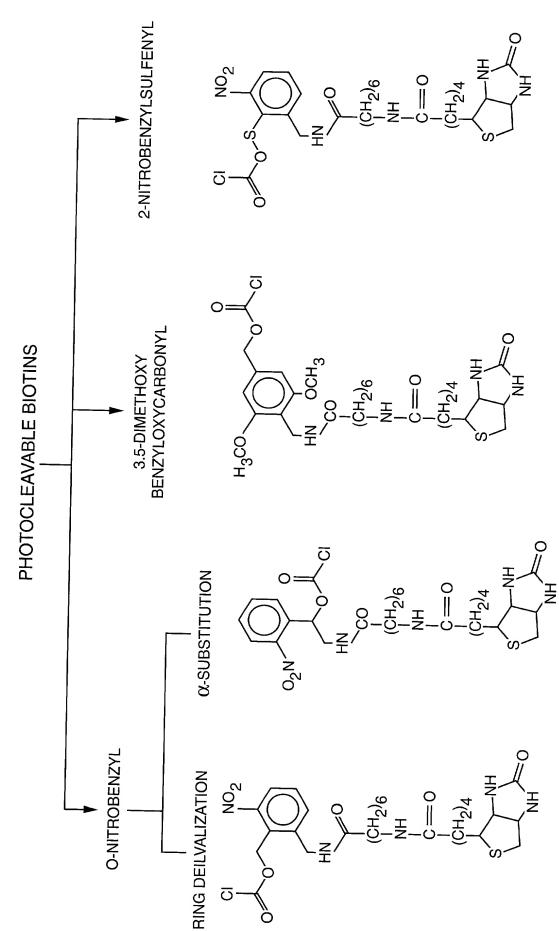
Filed: 10/09/2001 Group Art Unit:

Applicant. Kenneth J. Rothschild
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins

Atty. Docket No: AMBER-06819 Sheet 8 of 36

Serial No. Filed: 10/09/2001 Examiner: Group Art Unit:

Applicant: Kenneth J Rothschild
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins
Atty. Docket No.: AMBER-06819 Sheet 9 of 36



-1G. 8A

Serial No.. Examiner: Filed. 10/09/2001 Group Art Unit:

Applicant: Kenneth J. Rothschild
Title: N-Terminal and C-Terminal
Mayless In Nices at Park

Markers In Nascent Proteins
Atty. Docket No: AMBER-06819 Sheet 10 of 36

o. AMBER-00819 Sheet TU Of

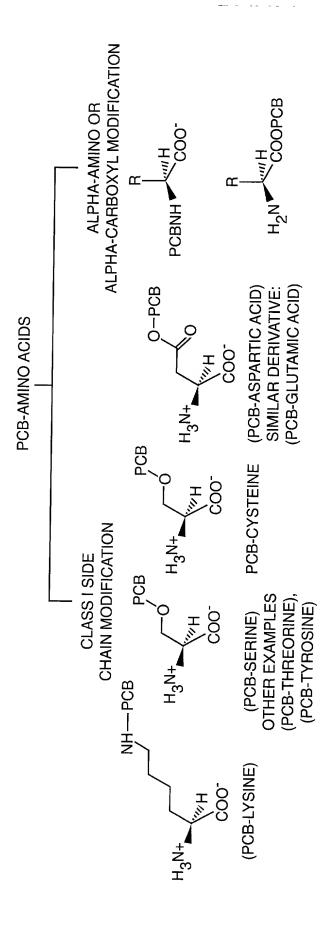


FIG. 8E

Serial No.. Examiner. Filed. 10/09/2001 Group Art Unit

Applicant. Kenneth J. Rothschild N-Terminal and C-Terminal

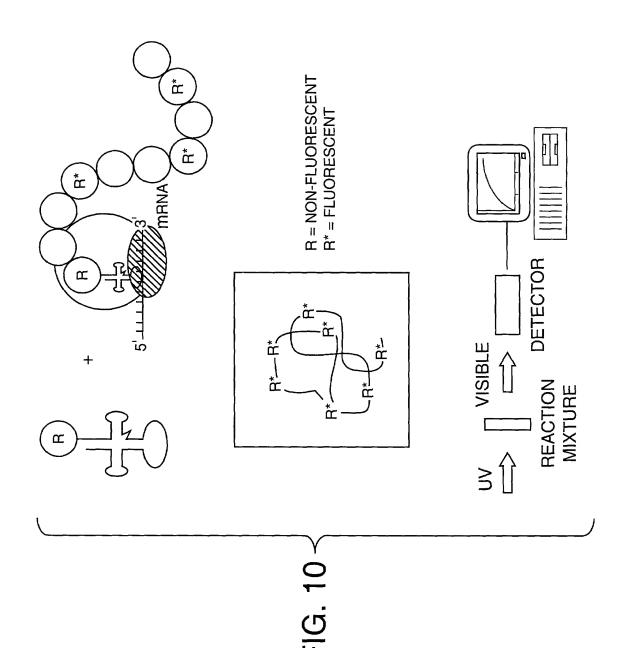
Markers In Nascent Proteins Atty. Docket No.: AMBER-06819 Sheet 11 of 36

OR OR

Serial No.. Examiner: Filed: 10/09/2001 Group Art Unit:

Applicant: Kenneth J. Rothschild
Title. N-Terminal and C-Terminal
Markers In Nascent Proteins

Atty. Docket No.: AMBER-06819 Sheet 12 of 36

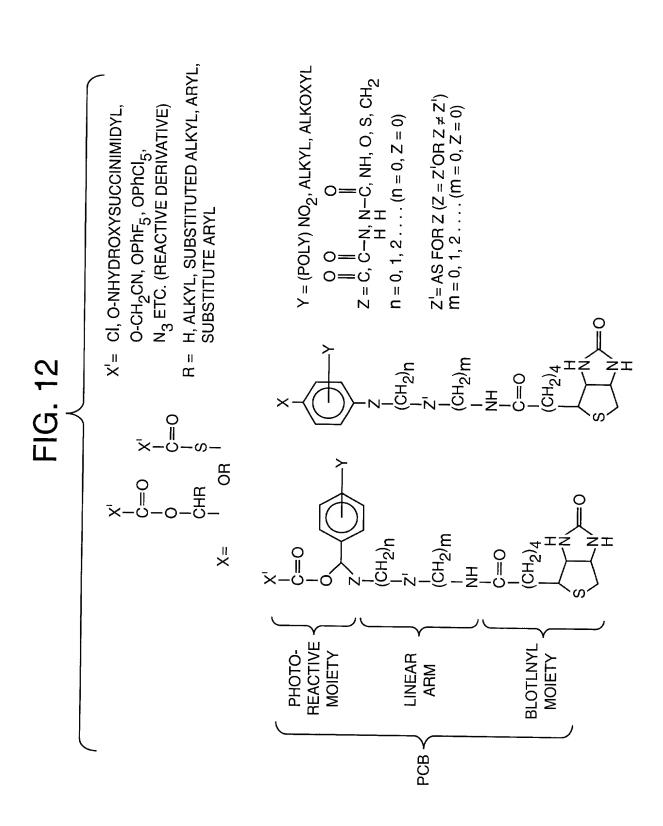


Serial No.. Filed. 10/09/2001 Examiner: Group Art Unit

Applicant: Kenneth J. Rothschild
Title N-Terminal and C-Terminal

Markers In Nascent Proteins
Atty. Docket No: AMBER-06819 Sheet 13 of 36

-CH3 (R=H, METHYL, ETHYL ETC.) 6,7 - (4', 5'-PROLINO) COUMARIN BASED ANALOGS NH PEPTIDE ÌΙ ŻΙ  $\mathbf{\alpha}$ 



Serial No..

Examiner:

Applicant: Kenneth J. Rothschild

Title: N-Terminal and C-Terminal Markers In Nascent Proteins
Atty. Docket No · AMBER-06819 Sheet 14 of 36

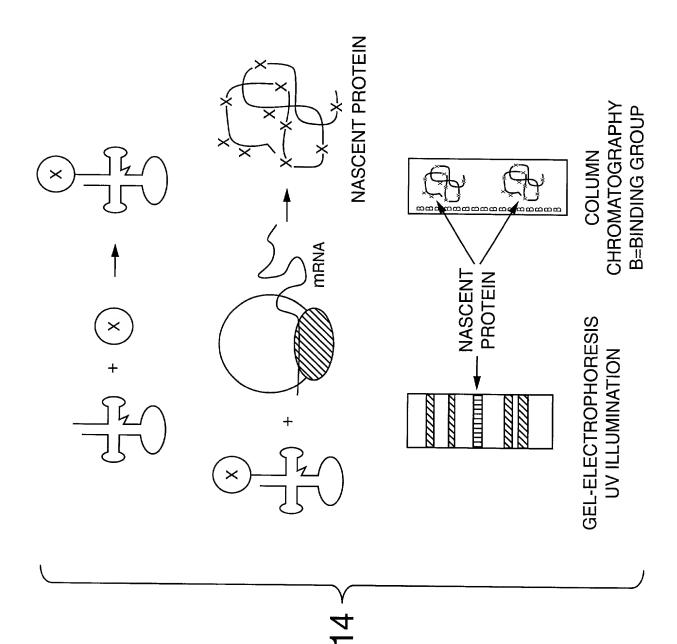
Filed. 10/09/2001

Group Art Unit:

Serial No.. Filed. LU/U3/2001 Examiner: G
Applicant: Kenneth J. Rothschild Group Art Unit: Title: N-Terminal and C-Terminal Markers In Nascent Proteins Atty. Docket No.: AMBER-06819 Sheet 15 of 36 NASCENT PROTEIN TRANSLATION 143 MISAMINOACYLATED INITIATOR TRNA OF THE INITIATOR TRNA MISAMINOACYLATION OF THE INITIATOR tRNA MISAMINOACYLATION Œ -00C

Serial No.: Filed: 10/09/2001 Examiner: Group Art Unit:

Applicant: Kenneth J Rothschild
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins
Atty. Docket No.: AMBER-06819 Sheet 16 of 36



Serial No.. Filed. 10/09/2001 Examiner: Group Art Unit:

Applicant. Kenneth J. Rothschild
Title. N-Terminal and C-Terminal
Markers In Nascent Proteins
Atty Docket No.: AMBER-06819 Sheet 17 of 36

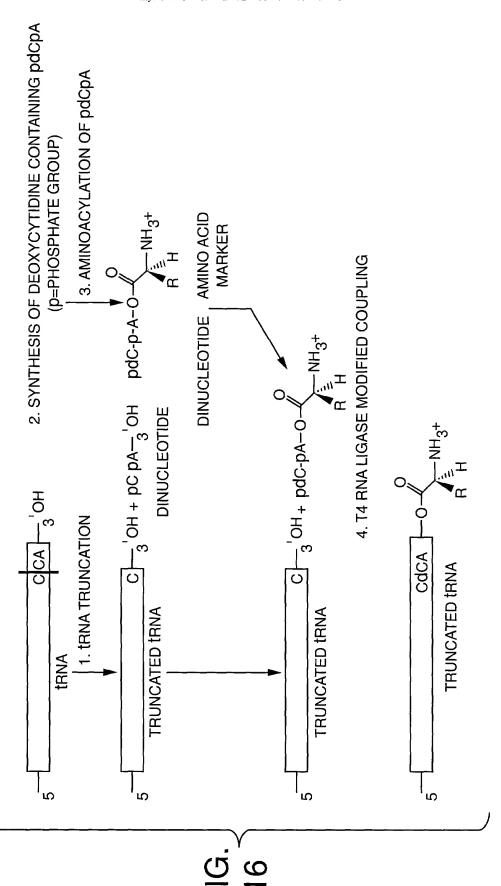
COO  $\mathsf{H}_{M_{\epsilon}}$ COOEt Hun **NaOEt COOEt** H<sub>3</sub>CO он<sub>з</sub>со (2)(3)(1)(4) BiH<sub>2</sub>C (8)(9)(8) (8)(12)(11)СООН H//, Fmoc NH▼ Fmoc-LYSINE PHOTOCLEAVABLE BIOTIN CHLOROFORMATE (13) S-N-PHOTOCLEAVABLE **BIOTIN LYSINE-Fmoc** m H HOOC ▼NHFmoc

FIG. 15

Serial No.. Filed. 10/09/2001 Examiner . Group Art Unit: Applicant: Kenneth J. Rothschild

Title:

N-Terminal and C-Terminal Markers In Nascent Proteins Atty. Docket No.: AMBER-06819 Sheet 18 of 36



Serial No.. Filed. 10/09/2001 Examiner: Group Art Unit:

Applicant: Kenneth J. Rothschild N-Terminal and C-Terminal Markers In Nascent Proteins Atty. Docket No.: AMBER-06819 Sheet 19 of 36

**CLOROFORMATE** 

BIO(2-CHLOROPHERN-**PHNOEPTROCHLORIDE** 

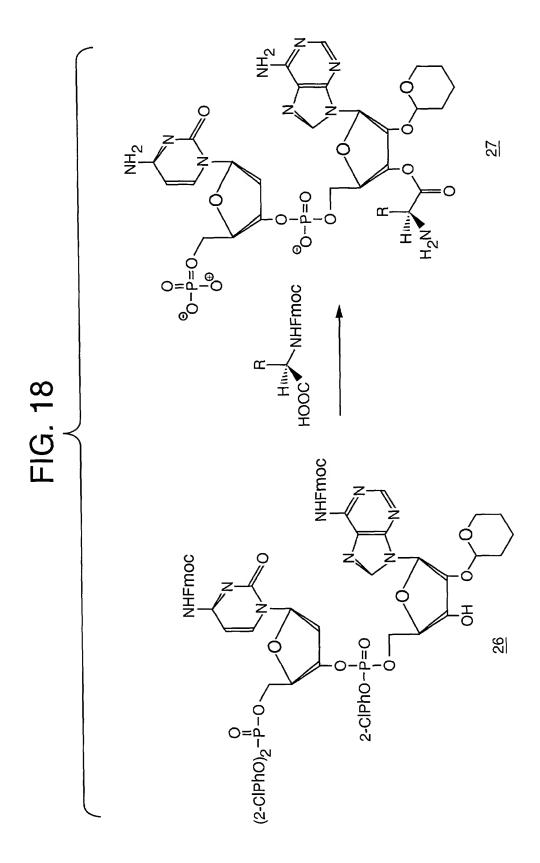
FIG. 17

Serial No.. Filed: 10/09/2001 Examiner: Group Art Unit.

Applicant: Kenneth J. Rothschild

itle: N-Terminal and C-Terminal Markers In Nascent Proteins

Atty. Docket No.: AMBER-06819 Sheet 20 of 36



Seriai No.: Filed: 10/09/2001 Examiner. Group Art Unit.

Applicant: Kenneth J. Rothschild

Title: N-Terminal and C-Terminal Markers In Nascent Proteins

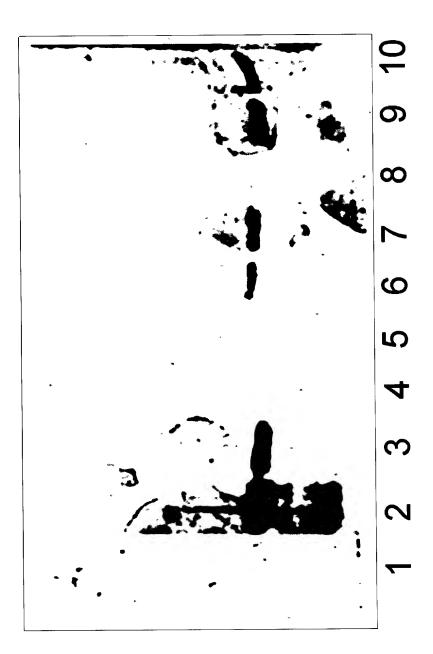
Atty. Docket No.: AMBER-06819 Sheet 21 of 36

Serial No.: Examiner:

Applicant: Kenneth J. Rothschild

Filed: 10/09/2001 Group Art Unit:

Title: N-Terminal and C-Terminal Markers In Nascent Proteins
Atty. Docket No: AMBER-06819 Sheet 22 of 36



Serial No.: Filed: 10/09/2001 Examiner: Group Art Unit:

Applicant Kenneth J. Rothschild

Title: N-Terminal and C-Terminal

Markers In Nascent Proteins

Atty. Docket No.: AMBER-06819 Sheet 23 of 36



Fig. 21A

Serial No.: Filed: 10/09/2001 Examiner: Group Art Unit:

Applicant: Kenneth J Rothschild
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins

Atty. Docket No.: AMBER-06819 Sheet 24 of 36

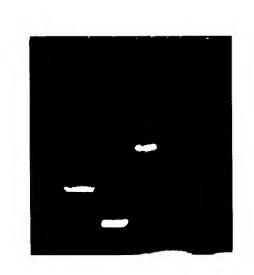


Fig. 21B

Serial No.: Examiner: Filed: 10/09/2001 Group Art Unit:

N-Terminal and C-Terminal Markers In Nascent Proteins

Applicant: Kenneth J. Rothschild

Atty. Docket No: AMBER-06819 Sheet 25 of 36

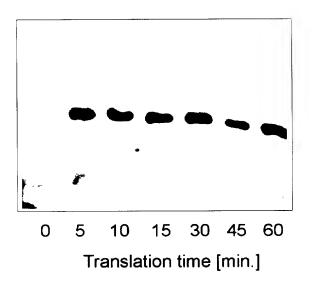
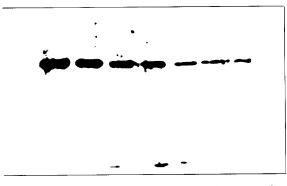


Fig. 22A

Filed: 10/09/2001 Serial No.: Examiner: Group Art Unit: Applicant: Kenneth J. Rothschild

Title: N-Terminal and C-Terminal Markers In Nascent Proteins

Atty. Docket No: AMBER-06819 Sheet 26 of 36



0 500 250 125 60 30 15 7 3 [ul, x 10 ]

Fig. 22B

Seriai No., rned. 10/09/2001 Examiner: Group Art Unit

Applicant: Kenneth J. Rothschild Title:

N-Terminal and C-Terminal Markers In Nascent Proteins

Atty Docket No.: AMBER-06819 Sheet 27 of 36

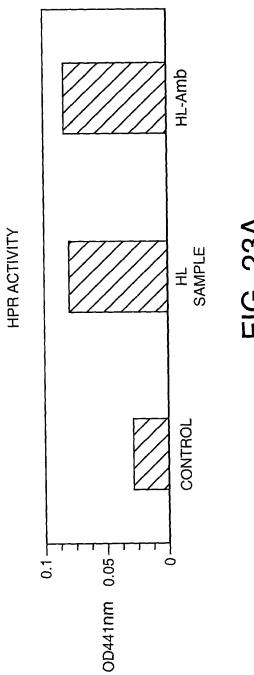
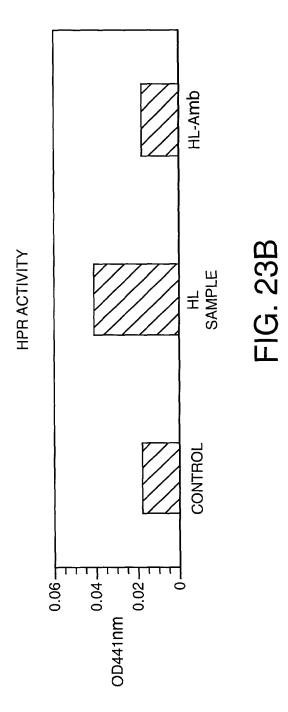


FIG. 23A

Serial No.: Filed: 10/09/2001
Examiner: Group Art Unit:
Applicant: Kenneth J. Rothschild

Title: N-Terminal and C-Terminal

Markers In Nascent Proteins
Atty. Docket No.: AMBER-06819 Sheet 28 of 36



Serial No.. Examiner:

Filea. 10/09/2001 Group Art Unit:

Applicant: Kenneth J. Rothschild

N-Terminal and C-Terminal Markers In Nascent Proteins

Atty. Docket No.: AMBER-06819 Sheet 29 of 36



Fig. 24

Seriai ino.: Examiner:

Applicant: Kenneth J. Rothschild

Filed: 10/09/2001 Group Art Unit:

N-Terminal and C-Terminal Markers In Nascent Proteins Title:

Atty. Docket No.: AMBER-06819 Sheet 30 of 36



**Fig.25** 

Serial No.: Filed: 10/09/2001 Examiner: Group Art Unit:

Applicant: Kenneth J. Rothschild
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins

Atty. Docket No.: AMBER-06819 Sheet 31 of 36

1 2 3 4 5 6 7 8 9 10

Fig. 26A

Serial No.. Examiner:

Filed: 10/09/2001 Group Art Unit:

Applicant: Kenneth J. Rothschild N-Terminal and C-Terminal Markers In Nascent Proteins

Atty. Docket No.: AMBER-06819 Sheet 32 of 36

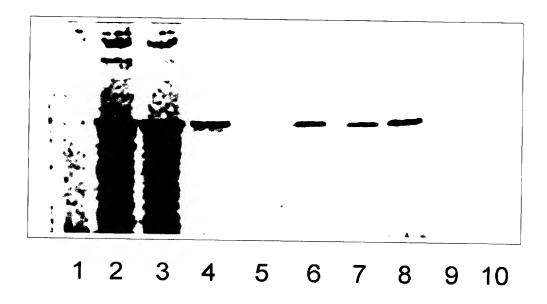


Fig. 26B

Serial No.. Filed. 10/09/2001 Examiner: Group Art Unit:

Applicant: Kenneth J. Rothschild
Title. N-Terminal and C-Terminal
Markers In Nascent Proteins
Atty. Docket No · AMBER-06819 Sheet 33 of 36

2

3

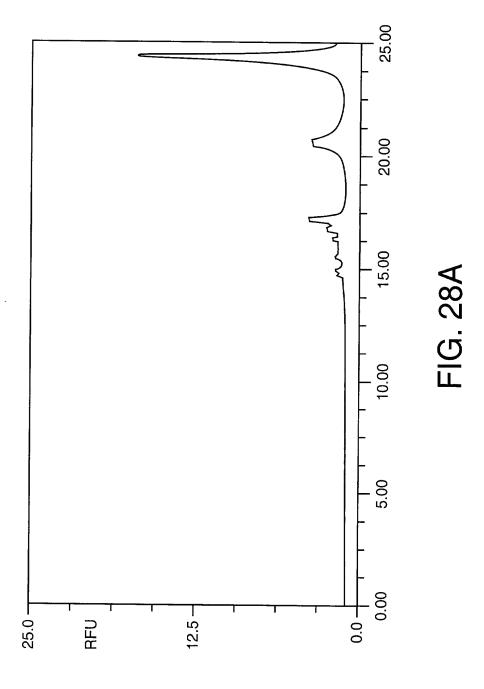
4

**Fig.27** 

Serial No.: Filed: 10/09/2001 Examiner: Group Art Unit:

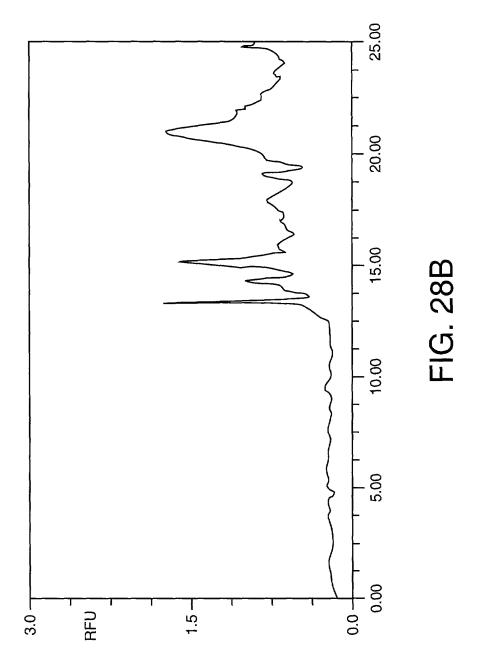
Title: N-Terminal and C-Terminal
Markers In Nascent Proteins
Atty. Docket No. AMBER-06819 Sheet 34 of 36

Applicant. Kenneth J. Rothschild



Filed: 10/09/2001 Group Art Unit Serial No..

Applicant: Kenneth J Rothschild
Title N-Terminal and Com-N-Terminal and C-Terminal Markers In Nascent Proteins Atty. Docket No · AMBER-06819 Sheet 35 of 36



Seriai No.. Examiner Filed. 10/09/2001 Group Art Unit:

Applicant: Kenneth J. Rothschild

Title: N-Terminal and C-Terminal

Markers In Nascent Proteins

Atty Docket No · AMBER-06819 Sheet 36 of 36

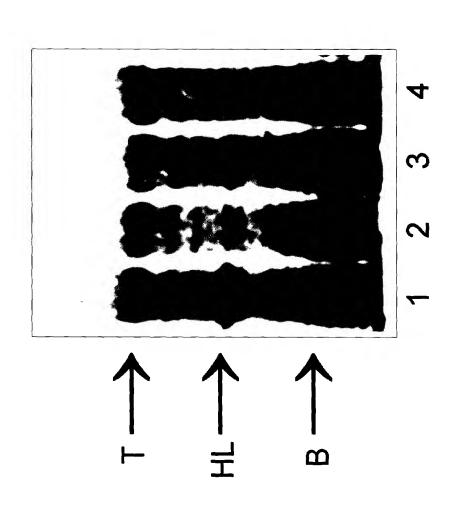


Fig. 29